



Goat Lick Overlook



Located along U.S. Highway 2, approximately 2.5 miles east of the Walton Ranger Station, is an exposed riverbank where mountain goats and other animals come to lick the mineral-laden cliffs. From the parking area, a short paved path leads to an observation stand overlooking the waters of the Middle Fork of the Flathead River. Here, the river's current has cut deeply into the easily eroded soil, creating

steep drop-offs and exposing a mass of gray clay containing minerals craved by mountain goats and other animals. Four natural mineral licks are known in the park, but no other lick receives as much use as this one.

The Goat Lick is an exposure of the Roosevelt Fault and is comprised of gypsum, kieserite, and sulfates. The craving for sodium and the shift to green vegetations each spring, prompt the

goats to visit the Goat Lick. Calcium, potassium, and magnesium found in the lick may help replace the elements goats lose from their bones during the winter. Additional explanations for visits to the lick include: an acquired taste for salts; a need for the minerals as a digestive acid; and the high goat concentrations which may allow for more intensive social interactions.

Movements to the Mineral Lick

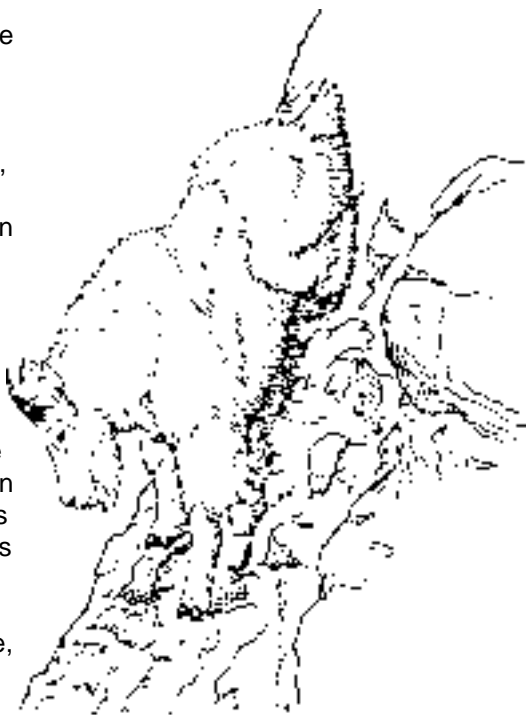
Glacier National Park goats travel as far as 4 miles to get to the Goat Lick, while others from more widely dispersed areas in the Flathead National Forest, travel several times that distance. April through August are the most concentrated use periods, although use occurs year-round. During late June and July, dozens at a time gather here. A population of approximately 95-120 mountain

goats from Glacier National Park, and 20-45 from the adjacent national forest, use the lick. Elk and deer are also attracted to these natural minerals.

Young mountain goats learn the route from the older animals. Most of their travel occurs on established trails. One well-worn goat trail traverses the crest of Running Rabbit Mountain and down the slope to the Goat Lick.

Use of the Goat Lick

The animals focus their activity at wet seeps on the lick where more minerals are carried in solution. Mountain goats are crepuscular in nature, and daily use of the lick tends to occur most frequently during twilight spans of dawn and dusk. A goat typically licks for a total of 24 hours, in 4-6 hour durations, on its first seasonal visit to the site. After the first day, more time is spent in feeding and bedding. Because individual goats compete for the best licking area, aggressive interactions are common on the lick. Watch for threatening horn swipes and rushes. The social ranking of goats serves to reduce direct conflict which, due to the sharpness of their horns, could result in serious injuries. At the lick, adult males (billies) and females (nannies) with kids share a position of near equal dominance, followed by barren nannies, subadults, and yearlings. On the range, however, adult billies often appear to be subordinate to nannies with kids.



What To Watch For

- Aggressive encounters between goats on the lick.
- Occasional accidental or confrontational falls into the river. Groups sometimes swim the river to reach the lick.
- Groups traveling to the lick in the evening. Elk and black bear are also occasionally seen on the slopes at dawn or dusk.
- Subtle differences in appearance between billies and nannies. Look for the slightly thicker and more gradually-sweeping horns of the billies.

Highway Crossing and Goat Management



From 1930 to 1979, mountain goats arrived at the Goat Lick by crossing the highway at six locations along a 700-foot section of road. Slow automobile speed on the narrow, winding road kept yearly mortality rates low. However, about 100 near-collisions were estimated each year. The goats partially adapted to the highway situation by arriving at dusk and departing at dawn, which brought them into the highway area during low vehicle-use periods. When the Federal Highway Administration proposed reconstruction of this segment of U.S. Hwy. 2, in an attempt to increase vehicle speeds, concern developed about the potential impact

on mountain goats crossing the highway to the lick. A plan to protect the goats was devised, which also satisfied the needs of visitors and traffic. The plan included: moving the visitor viewing site from the crossing area to an overlook; the construction of a bridge for the goats to pass under; and fencing above the highway to funnel goats under the bridges. In February of 1979, an avalanche swept away the 1930 bridge spanning this gulch and prompted reconstruction. The new bridge was completed in 1980 and goats now pass under the highway without interference from traffic or visitors.



Effects of Management

Bridges or underpasses have been built for animal crossings in only a few instances. Design has been shown to be critical to the success of an underpass. The Goat Lick and U.S. Hwy. 2 crossing area underpass is an important experiment in wildlife management. Researchers have monitored the new road-crossing area to determine

the success of the management actions. There is decreased hesitation time before entering the underpass, and fewer separations of kids and nannies. Also, goats now travel to the lick at all hours of the day. These are certainly indications that the goats are more comfortable with this new road-crossing design.